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ANN WILSON HAYNES, Editor
ALTON E. WILSON, Associate Editor

Deaths From Accidents — California, 1951

Although death rates from motor vehicle accidents and from total accidents have declined during the period that such statistics have been kept in California, the seriousness of accidental deaths must be appraised in relation to other causes of death. Deaths from accidents are exceeded in numerical importance only by two other cause groups, cardiovascular-renal diseases and cancer. It may not be an exaggeration to state that more accidental deaths are preventable than deaths from any other cause.

Accidents become increasingly important to us with the advancements made by medical science in lowering our death rate from disease. In examining the various causes of death we find here a group of deaths that might have been prevented.

Certain questions then seem to arise: If we are to prevent these deaths how can statistical information help? What can we learn from studying these records? What classifications do we have in existing data which permit us to answer questions about accidental death?

WHAT CAUSES THESE ACCIDENTAL DEATHS?

External causes of accidental deaths are classified by the International Classification of Diseases, Injuries and Causes of Death. This code has two main divisions of accidents—*transport* and *nontransport*. There are a total of 127 categories which group all causes of accidents. Some of these groups are further divided to better identify the cause of the accident.

The transport group comprises five major categories identifying the means of transportation—railroad, motor vehicle, other road vehicles, water transport, and aircraft. Motor vehicle accidents not only show the type of accident but also are further divided to show the vehicle involved, such as passenger car, bus, or goods transport.

Nontransport accidents include such groups as poisoning (by substance used), falls, fire and explosion, firearms, drowning and other causes.

The WHAT of accidental deaths refers, of course, to causes. The most important type of causes are summarized in this table:

Cause	Number ¹	Percent	Rate ²
Total accidental deaths	6,960	100.0	62.7
Motor vehicle accidents	3,557	51.0	32.0
Other transport accidents	517	7.5	4.7
Accidental poisoning	292	4.2	2.6
Accidental falls	986	14.1	8.9
Fire and explosion	415	6.0	3.7
Drowning and submersion	333	4.8	3.0
Other and unspecified accidents	860	12.4	7.7

¹ California, 1951 (by place of occurrence).

² Rates are per 100,000 total population. The 1951 population estimate, 11,100,000, is from "California's Population," State Department of Finance, July, 1952, p. 4.

WHO ARE THESE PEOPLE?

What age groups have high proportions of fatal accidents? Are boys or are girls more apt to have fatal accidents? In order to answer this type of question, tabulations are made in the Bureau of Records and Statistics by age group and sex as well as by external cause.

In motor vehicle accident fatalities the individual is identified as a pedestrian, pedal cyclist, or occupant of the vehicle.

"WHO dies from accidents?" might be answered by one word, "anyone." No age, sex, race, economic or other group is free from accidental deaths. But, more specifically, we can say that the death rate from accidents is higher among males than among females. Almost 75 percent of those who died from accidents in California, 1951, were males. This great difference is probably a function, in large part, of exposure to risk. With regard to age, we can examine the impact

of accidents in two major ways. When accidental deaths are calculated as a percent of total deaths, children, 5-14, and young adults, 15-34, are most heavily victimized. When death rates per 100,000 population in various age groups are calculated, persons over 65 suffer the highest rate of accidental deaths.

Age	Deaths from:			
	All causes	Accidental	Number	Percent
Total all ages	103,816	6,960	6.7	
Under 1 year	6,358	197	3.1	
1-4 years	1,227	392	31.9	
5-9 years	552	193	35.0	
10-14 years	343	158	46.1	
15-19 years	668	382	57.2	
20-24 years	1,190	607	51.0	
25-34 years	3,039	1,018	33.5	
35-44 years	5,617	943	16.8	
45-54 years	10,888	814	7.5	
55-64 years	17,875	718	4.0	
65-74 years	25,175	745	3.0	
75-84 years	22,111	548	2.5	
85 and over	8,713	227	2.6	
Age not stated	60	18	*	

* Percents not calculated for less than 100 deaths.

WHERE DO THESE ACCIDENTS OCCUR?

This is especially vital information in studying non-transport accidents for the purpose of prevention. The place of the accident is identified as: home, farm, mine and quarry, industrial place and premise, place of recreation and sport, street and highway, public building, resident institution, other specified place, and place not specified.

Deaths in motor vehicle accidents show whether the accidents occurred on the street or highway or were considered nontraffic motor vehicle deaths.

The WHERE of accidental deaths may be summarized as follows:

Cause	Number ¹	Percent	Rate ²
Total nontransport accidental deaths	2,794	100.0	25.2
Home	1,356	48.5	12.2
Farm	80	2.9	0.7
Industrial place and premises	257	9.2	2.3
Street and highway	104	3.7	0.9
Public building	125	4.5	1.1
Resident institution	179	6.4	1.6
Other specified place	507	18.1	4.6
Place not specified	186	6.7	1.7

¹ California, 1951 (by place of occurrence).

² Rates are per 100,000 total population. The 1951 population estimate, 11,100,000, is from "California's Population," State Department of Finance, July, 1952, p. 4.

WHEN DO THESE ACCIDENTS OCCUR?

This information is given on the death certificate but is not recorded on the statistical cards of the State Department of Public Health, so is not readily available. Valuable information on motor vehicle accidents can be obtained from the annual statistical report published by the Department of California Highway Patrol. Information as to the time of the accident—hour, day, or month—is included in this volume.

WHY DO THESE DEATHS OCCUR?

When this can be answered satisfactorily we can really begin cutting down unnecessary deaths. Some of the data that we now have on accidental deaths show us where our biggest problems are.

Industrial accidents have been greatly reduced in recent years. Why can't we reduce other accidents?

The WHY of accidental deaths can not be conveyed by statistics alone, nor can it be answered easily. The reader interested in this, the ultimate remedial question, is urged to read the following articles: E. Richard Weinerman, "Accident-Proneness: A Critique," *American Journal of Public Health*, 39:1527-31, December, 1949; A. G. Arbous and J. E. Kerrich, "Accident Statistics and the Concept of Accident-Proneness," *Biometrics*, 7:340-433, December, 1951. Both articles have well selected references for further exploration of the "why" of accidents.

Department Represented at Migrant Labor Conference

The State Department of Public Health was represented at the Southwest Regional Conference on Migrant Labor in Albuquerque, New Mexico, March 4th-6th, by Mrs. I. H. Teilman of the Fresno Health Division Coordinating Council and Jean Hoodwin, Social Service Consultant. Emphasis of the conference was on the needs of children of migratory workers, with consideration given to health, education, child labor, welfare, housing and recreation aspects.

California's experience in the migrant situation in Fresno County was the basis of much discussion. The conference used information about such projects to familiarize participants with efforts that have been made to solve problems caused by migrant labor. Although conference participants felt that local communities need financial help in meeting problems of the migrant group, it was the consensus that the local community is the level at which these problems must be solved.

As a result of the interest engendered by this conference Dr. C. G. Salisbury, Director, Arizona State Department of Health, visited Fresno to observe the Westside Project.

Otolologists believe that many of this country's approximately 3,000,000 children with defective hearing may be spared from becoming hard-of-hearing adults if they obtain corrective medical treatment at the time their hearing loss is detected. A campaign for periodic audiometer tests for school children is spearheaded by the American Hearing Society. About one-half of the states now require such tests.—American Hearing Society

THE CASE FOR WATER FLUORIDATION *

JOHN W. KNUTSON, D.D.S., Dr. P.H.
Chief, Division of Dental Public Health, U. S. Public Health Service

Fluoridation of community water supplies is one of the truly important developments in the field of preventive dentistry. Current discussion of this measure brings to mind another preventive health technique—inoculation against smallpox introduced in the American colonies 231 years ago.

Inoculation made quite a stir. It was a success from the beginning, but it created so much excitement and opposition that those who submitted to it were considered a public menace. One of its ardent supporters, Cotton Mather, turned his home into a secret inoculation center. Even as late as 1774, a hospital in Salem, Massachusetts, was burned for fear that it would be turned into a hospital for inoculation. Yet today, due to inoculation and later to vaccination, smallpox is virtually unknown in this Country.

This is an example of how every great public health measure has met with a certain degree of organized opposition before it was finally accepted. This has been true of pasteurization of milk, chlorination of water, and all the rest. Controlled water fluoridation, hailed as the most important development in the history of preventive dentistry, is no exception.

It is now more than a year since the American Dental Association put its stamp of approval on water fluoridation as a mass method of reducing the incidence of tooth decay by 65 percent. Similar endorsements have come from all the other national groups concerned with promoting dental health—the American Public Health Association, the American Association of Public Health Dentists, the American Medical Association, the U. S. Public Health Service, and many others. These highly reputable organizations did not give their blessing lightly. They approved fluoridation only after careful study by competent members and consultants, experts with broad scientific knowledge in every phase of fluoride chemistry and toxicology.

Yet progress has been far too slow. Why are we quibbling, delaying, pigeon-holing—in the face of exhaustive research and overwhelming proof?

What are the facts? In the simplest terms, they are these:

1. That an infinitesimal quantity of fluoride compound added to a community water supply will reduce tooth decay by as much as two-thirds.
2. That this protection against dental decay will carry over to the future generations of adults.

3. That it will save many millions of dollars in dental bills for those of us who are now receiving adequate dental care.

I should like to point out, however, that since tooth decay in this Country is occurring six times faster than our dentists can repair it, American children are getting only a fraction of the fillings they require. Thus, instead of reducing the Nation's over-all dental bill, fluoridation will bring us much nearer to the goal of adequate dental care for all our people.

All these things can be accomplished by adding fluoride to community water supplies in scientifically controlled amounts. It is a process that does not change the odor, taste, or color of water. It can be done simply and so inexpensively that for a total cost of about the price of one filling the average American can drink fluoridated water for his entire life.

Perhaps the most important single fact about fluoridation is that it will not harm any living thing or interfere with any industrial process. Except for its remarkable benefit to teeth, fluoridation will not affect us, our surroundings, or our way of life in any manner whatever.

This, then, is the case for fluoridation. The facts of the case can be told simply and briefly. Behind these facts, however, lies a mass of proof based on years of painstaking scientific research—because fluoridation is no magic formula concocted overnight.

The theory that tooth decay might be related to fluorine deficiency in the diet was first suggested in England as far back as 1892. Sixteen years later Dr. Frederick S. McKay, of Colorado Springs, decided to find out why some children in his state had mottling of the teeth. He discovered that something in their drinking water caused the mottling, known as "Colorado brown stain." McKay also noted that mottled teeth were more resistant to decay.

However, not until 1931 did scientists prove that excessive amounts of fluorine in drinking water were causing both the mottling and the resistance to decay. This observation led to detailed studies of the relation between decay and fluorine in water supplies. Studies of this kind were conducted not only in this Country but also in England, Sweden, Switzerland, Italy, India, and Africa. The results of these investigations were amazingly uniform.

They indicated clearly that tooth-decay rates decrease as the fluoride concentration in drinking water supplies increases from none to about 1.5 ppm. (parts per million). They also proved conclusively that chil-

*Condensed from an article in the *New England Journal of Medicine*, Vol. 246, No. 19, and reproduced here by their especial permission and that of the author.

dren born and reared in communities having from 1.0 to 1.5 ppm. of fluoride in drinking water have two-thirds less tooth decay than youngsters in nonfluoride areas. They also show that these same children do not suffer from mottled enamel.

If this small amount of natural fluoride reduces tooth decay *without mottling teeth*, the researchers reasoned, why could not the same effect be gained through scientific control? The theory that a two-thirds reduction in dental decay might result from bringing the fluoride content of water up to the level of 1.0 ppm. led to a series of controlled fluoridation studies, beginning in 1945 in Grand Rapids, Michigan; Newburgh, New York; and Brantford, Ontario. During the years that followed similar projects were undertaken in other communities.

The purpose of these studies was to determine whether or not controlled fluoridation would produce the same results as natural fluoridation, in the amount of from 1.0 to 1.5 ppm. Many of these studies have been under way for six or seven years, and in each case the answer has been an unqualified "yes."

Results have been similar in every city that has been fluoridating its water on a study basis. We are not guessing, therefore, when we predict what would happen should any community start fluoridating tomorrow: infants born in 1952 or later would have 65 percent fewer cavities by the time they are six than they will have without fluoridation.

These benefits are not temporary; they last a lifetime. This fact was demonstrated last year by a study of the teeth of adult residents of Boulder, Colorado, a fluoride-free community, and Colorado Springs, which has had 2.5 ppm. of natural fluoride in its water for at least 60 years. Russell, of the Public Health Service, found that by the time they reached middle age the natives of Boulder had lost three to four times as many teeth from decay as had persons of the same age in Colorado Springs.

So much for the facts about fluoridation, the information you need to have when your community is considering fluoridation. I should like now to touch upon the subject of misinformation. The rumors and half truths to which I am referring are often circulated by sincere persons who are misled either by emotional prejudice or by lack of knowledge. These opponents of fluoridation have made many charges against the program, but not one of their objections is supported by fact.

First, there is the common argument that fluoridation is a form of "mass medication." Fluoridating water to prevent tooth decay is no more a mass medication method than is chlorinating water to prevent typhoid or iodizing salt to prevent goiter or enriching

milk and bread with Vitamin D to prevent rickets. Mass medication means mass *treatment*, and no one has ever claimed that fluoridation will treat or cure existing cavities in the teeth.

Some fluoridation opponents are worried about what they call "tampering with nature." To them I should like to point out that fluoride is not a foreign agent in water. It is a normal constituent of many water supplies throughout this and other countries, ranging in amount from a mere trace through the ideal range of 1.0 to 1.5 ppm. and so on up to definitely excessive concentrations.

In the same vein, there is another common argument that fluoridation is undemocratic and destroys our civic rights guaranteed by the Constitution. This is not true, of course. We have been chlorinating our water supplies for nearly 50 years without losing any of our civic rights. It must be remembered, too, that fluoridation has not been and cannot be adopted by any community without first passing through all the traditional democratic processes. It must be approved by the state dental society* and the local health department, and it must have substantial public support. It must be endorsed and formally approved by the "city fathers." The health department must supervise the project, making certain that it is subject to all the necessary scientific controls. All this must be done at the local community level. It would be impossible for any state or federal official or government to order a community to fluoridate its water. Fluoridation cannot, in other words, be foisted on any community.

Perhaps the most common, and surely the most alarming, of the charges leveled against fluoridation is the claim that it is dangerous, and that those who advocate it are trying to "poison our water supplies." This is a perfect example of what I mean by misinformation.

It would be unwise to brush this objection aside—it should be analyzed critically and dispassionately so that there will be no doubt in anyone's mind that controlled fluoridation is a completely harmless public health measure. In the first place, we all know that sodium fluoride and the other fluoride compounds are toxic. Perhaps some of us do not realize, however, that fluoride is poisonous only when consumed in excessive amounts. I cannot overemphasize the phrase "excessive amounts" since it seems to be the unspoken basis for most of the arguments against fluoridation.

We know that fluoride is toxic in excessive amounts. So is baking soda, for that matter, and chlorine. In fact, nearly everything we eat and drink is harmful when consumed in excess. Vitamin D, for example, has practically wiped out the dread disease rickets in this

* Ed. Note: In California by local dental and medical societies.

Country, but it is also known to be toxic in massive doses. As for fluoride, you would have to drink over 400 gallons of water containing 1.0 ppm. at one sitting to receive a toxic dose. Such a large drink of water might kill you, of course, but water alone would do the job without any help from fluoride.

How can we believe that fluoridation poisons public water supplies when we realize that more than 3,000,000 Americans have lived all their lives in naturally fluoridated areas? In regions where water contains from 1.0 to 1.5 ppm. of natural fluoride, the natives are at least as healthy as you or I, and they have far better teeth. This is a fact that cannot be successfully disputed by even the ardent opponent of fluoridation—not if the argument is based on fact.

There have been rumors (and these are not even half-truths) that the recommended fluoride concentration can cause, or contribute to the cause, of any number of dire ailments, ranging from cancer and nephritis to discolored teeth. Not one speculation of this kind has ever been substantiated.

I shall discuss briefly one of the many research studies that contradict these alarming claims. The Wisconsin State Board of Health singled out three cities with varying degrees of water fluoride content, comparing their mortality rates from the nine leading causes of death: heart disease, cancer, and so forth. The cities surveyed were Green Bay, which for 40 years has had twice as much fluoride in its water as the scientifically recommended amount; Fond du Lac, with a fluoride content of only 0.45 ppm. in its water supply; and Sheboygan, where drinking water contains scarcely any fluoride. The survey covered the five-year period from 1940 to 1945; it showed clearly that there was no relation whatever between death rates and the quantity of fluoride in water.

There are those who will say that people who drink fluoridated water over a long period of years may become afflicted with fragility of the bones, resulting in frequent fractures and other bone ailments. This is certainly not true in areas where water fluoride content is at the optimum of 1.0 to 1.5 ppm., or even five times that amount. In fact, the results of fluorine-balance studies show that a remarkably efficient excretion of fluorine is a normal kidney function in adults.

A study of approximately 4,000 high school boys and Army selectees from different parts of the Country indicated that there is no relation between bone fracture and continuous exposure to fluoride water containing 2.0 ppm.—or even 4.0 or 5.0 ppm. The competent physicians who carefully examined these 4,000 young men could not find a single case of bone fragility caused by fluoride, even when fluoride content was

many times the optimum of 1.0 to 1.5 ppm. It is also worth noting that none of the boys differed in height or weight from the accepted standards of this Country.

I should like to point out, also, that in some parts of the United States there are water supplies with natural fluoride concentrations as high as 8 to 10 times the quantity prescribed for controlled fluoridation; the fluoride concentration in one town in Texas is 18.0. Yet not one actual case of chronic fluoride poisoning, with the exception of mottled enamel, has ever been reported in this Country. Remember this whenever you hear a rumor about some disease or other physical defect supposedly caused by drinking fluoridated water. It might be wise, the next time you hear such a rumor, to ask this one simple question: "How much fluoride did the drinking water contain?" It is highly improbable that your informant will know the answer, but, if he does, he will have to admit that the water in question contained many times the amount recommended for controlled fluoridation.

Regarding mottled enamel I should like to quiet any fears you may have on that score. It has been suggested that if we fluoridate community water supplies, our children may develop mottling. This is a natural fear, perhaps, since it was mottling that led to the original discovery that fluoride reduces tooth decay. It is an unnecessary fear, nevertheless, since it takes an excessive amount of fluoride to cause mottled enamel.

In any community, fluoride or nonfluoride, some children drink more water than others. An athlete probably consumes more water than a bookworm. This variation in individual water consumption, however, is no more peculiar to communities with controlled water fluoridation than to those with optimum natural fluoride in their water. You will recall that it was the extensive studies of the teeth of children in communities with natural fluoride that established the optimum fluoride concentration.

On the subject of mottling, the National Research Council, a venerable scientific body, said recently: "The margin between the optimal quantity of fluoride in drinking water which is required for maximal benefit in tooth development, and the amount which produces undesirable physiological effects is sufficiently wide to cause no concern."

This simple statement is a good summation of the case for fluoridation. It contains none of the drama or emotional appeal of some of the pamphlets being circulated by the opponents of fluoridation. The pamphlets are based on fear and misunderstanding. The National Research Council's statement, on the other hand, is sober and unemotional. It is founded

on a thorough scrutiny of the facts, a detailed examination of all the evidence by an organization dedicated to the study of every scientific project affecting the national welfare.

We are all familiar with the constant struggle to convert atomic energy to constructive, instead of destructive, uses—to use it for healing and not killing. Science has already been able to accomplish much the same feat in regard to sodium fluoride and the other fluorine compounds. After years of research and testing, science has succeeded in converting fluoride into a health benefit for the nearly 100,000,000 Americans who are now served by public water supplies.

Ninety-eight percent of our people are afflicted with dental decay, the most widespread of all diseases. Scarcely an American family escapes it. Yet here we have a chance to erase two-thirds of this distressing health problem through controlled water fluoridation—a preventive measure that is simple and amazingly inexpensive.

Unless we do adopt fluoridation, widely and without delay, it is safe to predict that this whole generation of children will have lost half their teeth by the time they are 40 years old. We can prevent this prediction from ever coming true if we refuse to submit to the fearful and misinformed attitudes of a very few persons. We can avert this national tragedy if we insist on knowing the facts and if we insist on giving the privilege of better teeth to our children and our grandchildren.

Gama Globulin Distribution Plan Adopted by Department

The California Plan for distribution and use of gamma globulin for the prevention of paralytic poliomyelitis has been formulated by the State Department of Public Health with the assistance of its Advisory Committee on Gamma Globulin. The plan adopted by the department follows recommendations of the Office of Defense Mobilization, the federal agency in charge of distributing the Nation's supply of gamma globulin to the states. These recommendations were drafted for ODM by a technical committee of the National Research Council.

Under this plan those eligible to receive gamma globulin from the initial allotment will be household contacts of diagnosed cases of polio. These household contacts must fall in the following categories: (a) persons 30 years of age and under, and (b) pregnant women of any age.

Here is the way gamma globulin will be distributed in California. ODM has informed the department that an initial allocation of approximately 180,000 cc. of

gamma globulin will be shipped to the department about May 15th. This amount has been determined on the basis of the mean number of cases of polio in the State for the past five years multiplied by 60 cc. of gamma globulin. Dosage is determined by the weight of the person who receives the injection and will average about 10 cc., which means California's initial allotment will be approximately 18,000 average doses.

Ninety percent of California's initial allotment will be made available to local health officers, who in turn will make it available to practicing physicians. The other 10 percent of the initial allotment to California will be held in reserve by the department for camps, state institutions and localized outbreaks characterized by unusually high attack rates.

One-third of the amount available to each local health jurisdiction will be sent as soon as sufficient material is delivered to the State Health Department by ODM. The additional amounts may be had upon request of the local health officer.

The local health officer will be the only source of supply to the practicing physician. It is the physician's responsibility to administer gamma globulin in accordance with the recommended plan when, in his clinical judgment, use of gamma globulin is indicated.

The Office of Defense Mobilization will retain approximately one-third of the national supply for use in mass community prophylaxis in selected communities which experience an unusually high incidence of polio and which meet other criteria set up by ODM for such allocation. About 10 percent will be held by ODM for research and emergency uses.

On May 1st criteria for selection of communities for mass prophylaxis had not yet been announced nor had the National Research Council yet made recommendations for such use. For the experimental work done last summer, small communities with an attack rate of 1 percent or more were selected. At no time in the past five years has there been the type of outbreak in a California community that would meet this criterion.

It is too early to make any predictions about polio in California this year. We are above the five-year mean for this time of year, but 1952 was above average, with the seasonal peak coming later than usual. We are now starting our upward swing from the seasonal low point.

Gamma globulin is not an active immunizing agent for poliomyelitis such as a vaccine would be. Research scientists are working to produce a polio vaccine. The protection given by gamma globulin is temporary and partial. Since gamma globulin is that fraction of the human blood that contains antibodies which a person has developed after an experience with one of a num-

ber of diseases, it is valuable for the prevention or modification of several diseases. Its effectiveness has been extensively tested and found good for the prevention and modification of measles, and it is also used for prevention of infectious hepatitis. There is some evidence of protective effect in German measles. In addition to the supply of gamma globulin for polio, a smaller amount has been set aside for other diseases and will continue to be available to physicians from local health departments under the following provisions recommended by the State Advisory Committee:

Measles: Use restricted to those who have a known exposure to the disease with no history of previous measles attack and who fall in one of the following categories: (1) children from 6 months through 36 months of age, (2) pregnant women, (3) persons debilitated or ill with other infections.

Infectious Hepatitis: Use restricted to household contacts of diagnosed cases who have not had a previous attack of this disease, and to susceptible persons exposed in a known common source or institutional outbreak of infectious hepatitis.

German Measles (Rubella): Use restricted to women without history of previous attack who suffer a known exposure to the disease during the first trimester of pregnancy.

Other Uses: In view of the anticipated short supply other uses should be discouraged.

The members of the Advisory Committee on Gamma Globulin to the State Department of Public Health are: Dr. Francis West, San Diego, Dr. H. Clifford Loos, Los Angeles, and Dr. Hollis Carey, Gridley, representing the California Medical Association; Dr. J. Gordon Epperson, Oakland, representing the California Osteopathic Association; Dr. Charles E. Smith, Berkeley, Dr. Samuel J. McLendon, San Diego, Dr. James D. Rinehart, San Francisco, and Dr. Harry E. Henderson, Santa Barbara, representing the State Board of Health; Dr. Roy O. Gilbert, Los Angeles, Dr. Henrik L. Blum, Martinez, and Dr. W. Elwyn Turner, San Jose, representing the Conference of Local Health Officers; Dr. Jesse Allen, San Francisco, American Red Cross.

The technical experts on the committee are: Dr. K. F. Meyer, Director, George William Hooper Foundation Medical Center, San Francisco; Dr. W. P. Shepard, San Francisco, member of the President's Advisory Committee on Health Resources; Dr. E. B. Shaw, Children's Hospital, San Francisco; Dr. Walter Ward, associated with one of the commercial laboratories which fractionates gamma globulin from whole blood, Berkeley; and Dr. A. C. Bower, Los Angeles County General Hospital.

More Indigenous Malaria Cases Develop Long After Exposure

Last fall nine Camp Fire Girls from the Bay Area and Sacramento became ill with malaria following their summer encampment at Lake Vera in Nevada County. These were the first cases of indigenous malaria in California since 1945. (See *California's Health*, October 15, 1952.) The source of these infections was found to be a veteran who became infected while serving in Korea and who suffered a relapse while camping at Lake Vera early in July. Laboratory tests of blood smears from all these cases showed the presence of *Plasmodium vivax*. Since the Korean strain of *Plasmodium vivax* is the temperate zone type which can have an incubation period ranging from 10 days to 300 days, concern was expressed at the time of the investigation of this outbreak that more cases might appear during the spring of 1953. This, unfortunately, has happened. Four more persons who attended the Camp Fire Girls' vacation camp last summer experienced their first attack of malaria early in April about 265 days after this exposure.

Over 1,500 persons are known to have attended the Camp Fire Girls' Lake Vera encampment last summer and it is possible that more cases exhibiting this long latent period may occur in the next few months. Therefore physicians are being asked to obtain blood smears from all persons who were at Lake Vera last summer and who are having unexplained febrile illnesses, with or without the classical chills, and to report all cases to their local health officer.

The State Department of Public Health is consulting with the Camp Fire Girl executives in keeping the mosquito population to a safe minimum at Lake Vera in preparation for this summer's encampment. Activities are being directed at removing all possible mosquito breeding places and planning for continuous spraying during the camp period.

International Health

Individuals who wish to keep abreast of international health programs will find *WHO Newsletter* helpful. It can be obtained without charge from Mr. Harold Ballou, Public Information Officer, Western Hemisphere Regional Office, World Health Organization, 1501 New Hampshire Avenue, Washington, D. C. More technical documents, such as the *Bulletin* of the WHO, the *Chronicle*, and special reports and monographs, may be ordered from the Columbia University Press, International Documents Service, 2960 Broadway, New York, N. Y.

Salmonella Infections Traced to Dried Egg Yolk Powder

In December, 1952, Swift and Company voluntarily withdrew from the market their dried egg yolk powder because of the possible association of this product with Salmonella infections in infants. (*California's Health*, January 15, 1953.) Late in November, 1952, *Salmonella montevideo* had been isolated from a diarrheal stool of an infant in Washington, D. C., and from samples of the egg product fed to this child. In an attempt to evaluate this association the United States Public Health Service requested that any case of Salmonella infection in an infant that had been fed dried egg yolk be reported to them by the state health departments.

Because this product had been on the market several months before the first case was recognized and because the contamination of the canned eggs was found to be irregularly spotted throughout the entire production, there has been some difficulty in evaluating the findings in California. Although a comprehensive study was not undertaken in California, a comparison of the laboratory isolations of *S. montevideo* for the years 1945-1950 and for the year 1952 indicates that this egg powder may have some relationship to the number of Salmonella infections in infants since July, 1952, when the product was placed on the market.

In California during the five-year period from 1945 through 1950, 104 laboratory isolations of *S. montevideo* were recorded:

1945-----	2	1948-----	13
1946-----	2	1949-----	41
1947-----	33	1950-----	13

There were 49 laboratory isolations of *S. montevideo* recorded for 1952, which was the highest number on record for California. Thirty-seven of these were received after July 1st and of these, 21 were received in December, the greatest number on record for a single month. Seventeen of the 49 were known to have been from infants, and 12 of the 17 were submitted after July 1st. These specimens were sent in from 11 counties and for the most part are believed to represent sporadic cases.

Association with the Swift product is definitely known to the State Health Department in only six cases of *S. montevideo* and one case of *S. bredeney*. Two other cases are suspected, but laboratory confirmation is lacking. Several samples of the egg product were examined

by the department's Division of Laboratories, but no Salmonella organisms were isolated. The available evidence suggests that Swift's dried egg yolk powder contributed to the unusually high number of Salmonella infections in infants in California in 1952, but is not conclusive.

These California findings are similar to those summarized by the U. S. Public Health Service in the January 30, 1953, issue of the *Morbidity and Mortality Weekly Report*. Reports from 17 states and the District of Columbia revealed 45 cases of *S. montevideo*, one case of *S. bareilly*, one case of *S. tennessee* and two cases of *S. oranienburg*. All of these cases followed the ingestion of dried egg yolk. In addition, 38 cases having a history of being fed egg powder were reported, but no laboratory confirmations were obtained. No statement as to the laboratory findings of samples of the egg powder fed these infants is made. However, previous copies of these reports imply that in 11 instances *S. montevideo* was isolated from the egg product as well as from the cases that had been fed the dried egg yolk powder.

NOTICE OF HEARING

The State Board of Public Health will hold a hearing at 10 a.m., May 26, 1953, in Conference Room No. 9 of the Hotel Biltmore, Los Angeles, on proposed amendment of regulations pertaining to the prophylaxis of the eyes of the newborn, California Administrative Code, Title 17, Chapter 1, Subchapter 3, Group 2, Sections 364, 465(d) and 618(d), and Chapter 4, Subchapter 1, Section 2560, pursuant to the authority of the Health and Safety Code, Sections 208, 1411, and 21100.

The purpose of these changes is to permit the use of medication other than silver nitrate in the prophylaxis of ophthalmia neonatorum in the eyes of the newborn.

Copies of the proposed regulations are available for inspection in the State Department of Public Health, Los Angeles and San Francisco offices, and are made a part of this notice by reference.

WILTON L. HALVERSON, M.D.
Executive Officer
State Board of Public Health

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